

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A system as in claim 28, and further comprising: for monitoring and controlling a line manufacturing tobacco products, comprising:

~~a plurality of production devices and units connected by a common interface network to at least one of a respective master control unit and a visual display;~~

~~an auxiliary inspection unit associated with the manufacturing line and connected to the network, for receiving tobacco products from at least one of the production devices and units as test samples, for verifying at least one characteristic of the tobacco products taken as test samples and transmitting signals indicative of the at least one characteristic to the network;~~

a processing and control unit associated with each production device and unit, each processing and control unit connected to the network for receiving the signals as prompts for corrective action; the auxiliary inspection unit thereby forming a feedback control loop with all of the processing and control units such that a corrective action can be applied to each production device and unit on which the at least one characteristic depends.

2. (Previously Presented) A system as in claim 1, wherein the auxiliary inspection unit comprises a detection apparatus capable in real time of verifying the characteristic of the product and relaying a signal indicative of the characteristic to at least one of the production devices or units.

3. (Previously Presented) A system as in claim 2, wherein the signal indicative of the characteristic is relayed by the auxiliary inspection unit to the visual display as a source of information.

4. (Cancelled)

5. (Previously Presented) A system as in claim 1, wherein the auxiliary inspection unit comprises a relative signal processing and routing unit connected to the common interface network and to the master control units of the manufacturing line.

6. (Previously Presented) A system as in claim 1, wherein the manufacturing line comprises a cigarette maker and a filter tip attachment machine.

7. (Cancelled)

8. (Currently Amended) A system as in claim 17, wherein the sampling device is connected to an outfeed of the filter tip attachment machine.

9. (Cancelled)

10. (Cancelled)

11. (Currently Amended) A system as in claim 140, wherein the sampling device comprises a conveying take-up roller operating substantially tangential to the outfeed roller, by which products are fed to the shifter mechanism.

12. (Previously Presented) A system as in claim 11, wherein the sampling device comprises a collection tray into which tobacco products are directed by the shifter mechanism when in the closed position.

13. (Previously Presented) A system as in claim 1, wherein the conveyor follows a path of which at least one leg extends substantially transverse to a vertical bulkhead of the filter tip attachment machine.

14. (Currently Amended) A system as in claim 140, wherein the feed channel includes at least one end portion presenting a profile of "S" outline.

15. (Currently Amended) A system as in claim 140, wherein the conveyor comprises a belt conveyor looped around return pulleys and including an active branch of which the function is to transfer the tobacco products from the outfeed of the filter tip attachment machine to the transfer mechanism.

16. (Previously Presented) A system as in claim 12, wherein the tray collecting the tobacco products is movable together with the shifter mechanism between a receiving position corresponding to the closed position of the shifter mechanism, in which the tobacco products are collected, and an idle position coinciding with a position in which the shifter mechanism is placed to direct the tobacco products onto the conveyor.

17. (Previously Presented) A system as in claim 15, wherein the transfer mechanism of the auxiliary inspection unit comprises a receiving mechanism by which single tobacco products are received from the sampling device and a feed mechanism by which the same single products are supplied to the detection apparatus.

18. (Previously Presented) A system as in claim 17, wherein the detection apparatus comprises a unit by which the single tobacco products are retained and transferred, and also a sensing and inspection system.

19. (Previously Presented) A system as in claim 18, wherein the retaining and transfer unit comprises a support member capable of movement back and forth along a predetermined path between two limit positions of which one coincides with the outlet of the feed mechanism, where a single tobacco product is picked up, and the other coincides with the sensing and inspection system.

20. (Previously Presented) A system as in claim 19, wherein the support member is pivotable about an axis parallel to the predetermined path between two limit positions.

21. (Previously Presented) A system as in claim 18, wherein the retaining and transfer unit comprises a rolling mechanism for rolling the tobacco products.

22. (Previously Presented) A system as in claim 21, wherein the rolling mechanism comprises a pair of rollers placed orthogonally to the predetermined path, rotatable about parallel axes in the same direction and affording a seat such as will accommodate a single tobacco product.

23. (Previously Presented) A system as in claim 19, wherein the sensing and inspection system comprises an optical system by which to inspect an entire outer surface of the single tobacco product.

24. (Previously Presented) A system as in claim 19, wherein the sensing and inspection system comprises at least one optical sensor serving to inspect an end portion of the single tobacco product.

25. (Previously Presented) A system as in claim 23, wherein the optical system comprises a first television camera equipped with a relative optical assembly, extending along the rollers and serving to inspect the entire outer surface of the single tobacco product, also a second television camera equipped with a relative optical assembly, capable of stepping motion along the rollers and designed to inspect predetermined portions of the outer surface of the single tobacco product.

26. (Previously Presented) A system as in claim 21, wherein the retaining and transfer unit of the auxiliary inspection unit is connected in parallel to the manufacturing line.

27. (Previously Presented) A system as in claim 17, wherein the receiving mechanism comprises a first arm carried by a slide capable of translational movement between a position coinciding with the outfeed of the sampling device and a position of release to a second arm movable in a rotary manner to direct the single tobacco products along a vertical channel connecting at the outfeed end with the retaining and transfer unit.

28. (Previously Presented) A system for monitoring and controlling a line manufacturing tobacco products, comprising:

a plurality of production devices and units connected by a common interface network to at least one of a respective master control unit and a visual display;

an auxiliary inspection unit associated with the manufacturing line and connected to the network, for receiving tobacco products from at least one of the production devices and units as test samples, for verifying at least one characteristic of the tobacco products taken as test samples and transmitting signals indicative of the at least one characteristic to the network;

wherein the auxiliary inspection unit comprises a transferring mechanism for transferring the tobacco products, connected to the manufacturing line by a sampling device for sampling products for testing purposes;

wherein the sampling device comprises a conveyor having single pockets, each for containing a tobacco product;

wherein the sampling device comprises a shifter mechanism, interposed between an outfeed roller of the filter tip attachment machine and the conveyor, and movable between a first position and a second position in which a feed channel directing products onto the conveyor is opened and closed, respectively.